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ZOOLOGICAL SERIES.

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LISTS OF SPECIES OF MAMMALS,
PRINCIPALLY RODENTS,

OBTAINED BY

W. W. PRICE, DR. S. E. MEEK, G. K. CHERRIE,
AND E. S. THOMPSON

IN THE STATES OF

IOWA, WYOMING, MONTANA,
IDAHO, NEVADA AND
CALIFORNIA

WITH

DESCRIPTIONS OF NEW SPECIES

BY

D. G. ELLIOT, F.R.S.E.,

CURATOR OF DEPARTMENT.



CHICAGO, U. S. A.

March, 1898.

LIST OF MAMMALS COLLECTED BY W. W. PRICE AND
ASSISTANTS, CHIEFLY IN CALIFORNIA.

The species enumerated in the following list were collected by W. W. Price and his assistants in 1895 chiefly in California in the counties of San Bernardino, Monterey, San Mateo, Santa Clara, Calusa, Lake, Calaveras, Eldorado, Amador and Alpine, as well as in the contiguous county of Douglas, State of Nevada. The collection comprised over 2,500 specimens, and a number of the species were represented by large and valuable series, exhibiting both sexes at all ages, affording a good idea of the changes that occurred in the color of the pelage, and of the distribution of the species over a considerable portion of California. The localities ranged from those on the coast, such as Portola, Carmel, etc., to an altitude of 10,000 feet, like that of Pyramid Peak, Eldorado Co.; while Anderson's Ranch on the Carson Plains, Douglas Co., Nevada, and San Antonio in San Bernardino Co., Southern California, represent the dry and desert-like regions.

While engaged with this collection I received valuable assistance from my friends Dr. J. A. Allen, Curator of Vertebrate Zoology in the New York Museum of Natural History, and Dr. C. H. Merriam, Chief of the Biological Survey, Department of Agriculture, Washington, to whom I desire to express my thanks. The large collection of Mammals and the fine library of the New York Museum afforded great facilities towards the satisfactory completion of my work.

ORDER RODENTIA.

FAMILY SCIURIDÆ.

1. *Sciurus fossor*.

Sciurus fossor. Peale, Mam. and Birds. U. S. Expl. Exp., 1848, p. 55.

Eight specimens from the Snow Mountains, Calusa and Lake counties, and three from Swiss River, Calaveras Co.

These specimens were taken in the latter part of August, during September and beginning of October, and only two, procured towards the latter part of September, have any indication of chestnut behind the ears. The backs are uniform bluish gray and black, presenting a grizzled appearance, and the feet are a pale gray with little of this bluish tinge, and are white or inclining to white over the outer edges. This species is apparently distributed in the interior, and replaced along the coast, and in the Southern part of the State by the following subspecies.

2. *Sciurus fossor nigripes*.

Sciurus fossor nigripes. Bryant, Cal. Acad. Scien., 1889, p. 25.

Ten specimens. 1, Carmel, Monterey Co.; 1, Mt. Hamilton, Santa Clara Co., and 8 from San Antonio, San Bernardino Co.

This is apparently a well marked race of the previous species and is easily recognizable by the black feet and the yellowish-brown back. All the specimens were procured in June, except the Mt. Hamilton one, which was taken in August and which has a conspicuous chestnut mark behind the ears, while of the San Antonio's examples two have the merest traces of it, and one only fairly shows it. In general measurements the two forms are practically the same.

3. *Sciurus hudsonicus californicus*.

Sciurus hudsonicus californicus. Allen, Bull. Am. Mus. Nat. Hist., vol. iii, 1890-91, p. 165.

Ten specimens of this sub-species are in the collection, taken in the months of July, August and September. 1 from the Snow Mountains, Calusa Co.; 1 from Hermit Valley, Calaveras Co.; 1 from Echo, Eldorado Co.; 2 from Pyramid Peak, Eldorado Co.; 1 from Woodford, Alpine Co., and 4 from Silver Lake, Amador Co.

These examples are interesting as not only showing the different pelages assumed at certain seasons of the year, but also exhibiting how late in the summer some individuals change. All, except the Silver Lake examples, are in the summer coat with the bright buff feet and streak along the thighs, and the buff, or white underparts, this last appearing in August and September. The Silver Lake specimens on the other hand, although some of them were procured as late as July 5th, are still in the winter coat, considerably worn, with the feet dark gray, with

slight indications in spots of the buff hair appearing, none however on the thighs, and the entire under parts dark gray, with a tinge of buff showing on the throat.

If the changes of pelage which the *S. hudsonicus* group undergo were unknown, it might readily be supposed that these specimens represented two separate races, as with certain ones of each style, the months in which they were taken are the same.

4. *Tamias townsendii hindsii*.

Tamias townsendii hindsii. J. E. Gray, Ann. Mag. Nat. Hist., vol. x, 1842, p. 264.

A single specimen from the Snow Mountains, Calusa Co.

This example, which is a male, was procured on the 27th of September, and is in process of change from the post-nuptial pelage to that of winter. The upper part of the back, the shoulders and flanks are reddish buff with the stripes sharply defined, while the remainder is dark gray with reddish brown stripes.

I believe that the locality in which this specimen was taken is the farthest east of any yet recorded for the species.

5. *Tamias senex*.

Tamias senex. Allen, Bull. Am. Mus. Nat. Hist., vol. iii, 1890-91, p. 83.

Number of specimens, 43, from the following localities: 3, Bloods, Calaveras Co.; 8, Hermit Valley, Calaveras Co.; 13, Pyramid Peak, Eldorado Co.; 6, Woodford, Alpine Co.; 1, Blue Lake, Alpine Co.; 12, Silver Lake, Amador Co.

Most of the examples are in the pale gray pelage usually seen, but some taken in July and August are in the post-nuptial dress, which exhibits a rich orange color on the back and sides, with the stripes both black and white, sharply defined. The light colored stripes vary from a pale gray to ivory white.

6. *Tamias pricei*.

Tamias pricei. Allen., Bull. Am. Mus. Nat. Hist., vol. vii., 1895, p. 333.

Twenty specimens obtained at Portola, San Mateo Co., taken from December to April.

All these examples are typical, and exhibit no perceptible variation of the color of the pelage from December to April. It

has been suggested that this species is only a stage of pelage of *T. merriami*, the succeeding species, but no evidence has yet been obtained to support this view. It must be said, however, that our specimens of *T. pricei* have all been procured during the late winter and early spring months, and we do not know how it appears in midsummer. From our present knowledge of the animal it seems to be a very distinct form.

7. *Tamias frater*.

Tamias frater. Allen, Bull. Am. Mus. Nat. Hist., vol. iii., 1890-91, p. 88.

Specimens, 148, from following localities: Pyramid Peak, Eldorado Co., 32 ad., 9 juv.; Echo, Eldorado Co., 3 ad., 4 juv.; Hermit Valley, Calaveras Co., 17 juv.; Bloods, Calaveras Co., 2 juv.; Silver Lake, Amador Co., 67 ad.; Blue Lake, Alpine Co., 2 ad.; Woodford, Alpine Co., 3 juv.; Edgewood, Douglas Co., Nev., 2 ad., 5 juv.; Anderson River, Douglas Co., Nev., 1 juv.; Mt. Siegel, Douglas Co., Nev., 1 juv.

The adults were taken in June, July and August, the young in the last two months only. The series is rather remarkable for the large number of examples in the post-nuptial pelage, which seems to be assumed most generally in August, though an occasional specimen possesses it as early as the middle of July. In this dress all the back and sides are a reddish orange, and the stripes are darker in hue and more sharply defined than at other seasons of the year. Thus attired it is a very handsome little creature. The changes in the pelage of these animals has been thoroughly explained by Dr. Merriam in his excellent paper on the "Chipmunks of the genus *Eutamias*" (Proc. Biol. Soc. Wash., Vol. XI., pp. 189-212, (1897)), in which it is shown that this post-nuptial or post-breeding pelage is retained for only three months, possibly for a shorter period, when it gives way by a complete moult to a less bright pelage, which is retained throughout the winter, and becomes very much worn in the spring and during the breeding season, when a second moult occurs, and the bright rich post-breeding pelage is assumed. In these different styles of dress the species presents an altogether changed appearance, and until the fact that there were two moults was ascertained, some doubts arose as to whether or not they represented more than one species. All the young animals in the collection possess a very similar pelage to the post-breed-

ing one of the adults, with the flanks richly colored, and this would seem to be the first dress they assumed.

8. *Tamias amænus*.

Tamias amænus. Allen., Bull. Am. Mus. Nat. Hist., vol. iii., 1890-91, p. 90.

Sixty-one specimens, as follows: Hermit Valley, Calaveras Co., 5; Bloods, Calaveras Co., 1; Echo, Eldorado Co., 2; Pyramid Peak, Eldorado Co., 27; Woodford, Alpine Co., 2; Silver Lake, Amador Co., 19; Edgewood, Douglas Co., Nev., 4; Anderson River, Douglas Co., Nev., 1.

The examples were taken in the months of June, July and August, and represent adults and young from the worn winter pelage to that of the post-nuptial, in which latter dress it closely resembles *T. frater*, but is considerably smaller. The specimens from Douglas Co., Nevada, resemble the next species from Mt. Siegel, and being young are not much different in size, but are readily distinguishable by the darker central portion of the tail beneath, and also in having the tail thicker and more bushy. In the winter pelage, probably because the fur is longer and more dense than that of the post-nuptial, the stripes on the dorsal region are not so distinct, being much less sharply defined.

9. *Tamias minimus pictus*.

Tamias minimus pictus. Allen., Bull. Am. Mus. Nat. Hist., vol. iii., 1890-91, p. 115.

Seventeen specimens, all from Mt. Siegel, Douglas Co., Nevada. These resemble to a certain extent examples of *T. amænus*, and are all apparently in post-nuptial pelage, having been taken in the latter part of July. They are smaller in their measurements, but with rather longer hind feet, a short, thinly-furred tail, and the central portions beneath a very pale buff, as are also the legs and feet. The stripes on the dorsal region are very distinct, and those on each side of the central blackish-brown stripe, are a clear light gray.

10. *Tamias chrysodeirus*.

Tamias chrysodeirus. Merr. Nor. Am. Fauna, 1890, No. 4, p. 19.

Sixty-two specimens from the following localities: Hermit Val-

ley, Calaveras Co., 6; Silver Lake, Amador Co., 24; Woodford, Alpine Co., 14; Mt. Siegel, Douglas Co., Nevada, 12; Winters Mine, Douglas Co., Nevada, 3; Edgewood, Douglas Co., Nevada, 3.

These specimens agree, apparently, with Dr. Merriam's description of the type (l. c), but the legs and feet are very pale, having in most of the examples no suffusion of ochraceous, being in many instances almost white. The under surface of the tail varies also considerably in depth of color, in some being chestnut, and in others ochraceous, these from the same localities. The white stripe in some is continued to the tail, while in others it does not go beyond the black stripes. A marked difference also is observable in the amount and depth of color in the ochraceous on the neck and shoulders; sometimes there is hardly a perceptible difference between the deep color on the top of the head, neck, shoulders and face, while again in other examples, except on the head, it would be almost entirely absent; and these specimens are all taken in the same months, from the same localities, and of both sexes. The examples were obtained from the latter part of June to the middle of August. The specimens without the ochraceous lines on the neck and face, present a very different appearance, and seem like another race, and the animal evidently varies greatly during the year in the depth of its coloring, and also in the distribution of the lines, as well as in the size and extent of the prominent white stripe.

II. *Spermophilus beecheyi*.

Arctomys (Spermophilus) beecheyi. Rich. Faun. Bor. Amer., vol. i, 1829, p. 170, pl. xii B.

Specimens, 28, as follows: Carmel, Monterey Co., 2; Alum Rock Park, 10; Mt. Hamilton, Santa Clara Co., 15; Pyramid Peak, Eldorado Co., 1.

These examples represent adult and young; those, however, from Mt. Hamilton being all young. The specimen from Pyramid Peak, while possessing the general dark coloration characteristic of the species, has considerable more white upon the head and shoulders than is usually seen in *S. beecheyi*, and is leaning, apparently, towards *S. b. fisheri*, which is met with a short distance further toward the east, in Douglas Co., Nevada. The young have a much paler pelage than the adults and are covered with buffy white spots.

12. *Spermophilus beecheyi fisheri*.

Spermophilus beecheyi fisheri. Merr. Proc. Biol. Soc. Wash., vol. viii, 1893, p. 133.

Twenty specimens, Anderson Ranch, Douglas Co., Nevada, 16; Mt. Siegel, Douglas Co., Nevada, 4.

These are all of the pale colored variety described by Dr. Merriam (l. c.), with much white on the head and shoulders. The Mt. Siegel examples, while resembling those from Anderson's Ranch, are yet considerably paler, but as they were taken a month earlier, in July, this and the different locality may account for the change in their appearance.

13. *Spermophilus beldingi*.

Spermophilus beldingi. Merr. N. Y. Acad. Nat. Scien., vol. iv, 1888, p. 317.

Specimens, 41, from the following localities: Hermit Valley, Calaveras Co., 6; Silver Lake, Amador Co., 18; Woodford, Alpine Co., 2; Pyramid Peak, Eldorado Co., 15.

There is very little variation in the color of this species, which appears to be pretty constant, the changes mainly consisting in the greater depths of the hues, some being a very rich brownish red above.

SUB-FAMILY ARCTOMYINÆ.

14. *Arctomys flaviventer*.

Arctomys flaviventer. Aud. & Bach., Jour. Acad. Nat. Scien., Phila., 1842, vol. viii, p. 309.

Ten specimens, mostly young, as follows: Echo, Eldorado Co., 1 ad., 1 juv.; Pyramid Peak, Eldorado Co., 5 juv.; Silver Lake, Amador Co., 1 ad.; Winters Mine, Douglas Co., Nevada, 1; Mt. Siegel, Douglas County, Nevada, 1.

The specimen from Winters Mine has shed all its hair, and exhibits only the under fur, and of course appears very different from the other examples. They were all taken during July.

FAMILY MURIDÆ.

SUBFAMILY CRICETINÆ.

15. *Reithrodontomys longicaudus*.

Reithrodontomys longicaudus. Baird U. S. P. R. R., Exp. & Surv., vol. vi, 1857, p. 451.

Forty-one Specimens from Portola, San Mateo Co.

16. *Reithrodontomys megalotis deserti*.

Reithrodontomys megalotis deserti. Allen Bull, Am. Mus. Nat. Hist., 1895, vol. vii, p. 127.

A single specimen of this sub-species from Woodford, Alpine Co.

17. *Neotoma cinerea*.

Neotoma cinerea. (ord). Baird U. S. P. R. R. Exp., vol. viii, 1857, p. 499.

Twenty-two specimens adult and young, from Woodford, Alpine Co. These examples were all taken in the month of August, and range from the young, not over eight and a half inches in total length of body and tail to the full-grown animal. The young are covered with a blue-gray fur, quite different in appearance from that of the adult, and the fur in all ages is very soft and silky.

18. *Neotoma Desertorum*.

Neotoma desertorum. Merr. Proc. Biol. Soc., Wash., vol. ix., 1894, p. 125.

Five specimens from Anderson River, Douglas Co., Nevada.

The examples agree very well in measurement with the average given by Merriam (l. c.), of eight males from Furnace Creek, Death Valley, California. None of them I should judge, however, to be fully adult, or, rather, old individuals. None are pinkish buff on the upper parts, as described of the type, but as they were collected in August this may be a seasonal coat, the pinkish phase being assumed later, and this view appears to be sustained by specimens in the collection of the Am. Mus. Nat. Hist. taken in March and May, which have the pinkish or reddish coat. Dr. Merriam's specimens were taken in January. The gray pelage would therefore seem to be characteristic of summer. Two specimens have the under parts deep buff; in one the white chest spot is barely visible. Tails of all the examples dusky above, buffy white beneath.

19. *Neotoma fuscipes*.

Neotoma fuscipes. Baird. U. S. P. R. R. Expl. Exp., vol. viii, p. 495.

One hundred and sixty-eight specimens from Portola, San Mateo Co., obtained in the months of December, January, March and April.

This large wood rat is generally recognizable by its size, by the

dusky hind feet, the very dark color of the upper parts, and the uni-color black tail. The throat, and a spot on the chest, and the space between the hind legs is white to the roots of the hair. It grades on the south through the subspecies I have called *annectens* into *N. microtis* Thomas, and on the east through another subspecies, *affinis*, described below, into *N. f. streator*, Merriam. There is much individual variation in the skulls of different examples, and I do not feel at all satisfied that there is any cranial character that can be cited which in all cases, or indeed in most of them, would serve to identify the species. I would rather trust to the color test given farther on, although this possibly, among specimens of the intergrading subspecies, might not always prove to be an unerring guide.

20. ***Neotoma fuscipes annectens*** subsp. nov.

Fifteen specimens from Portola I designate by this title, of the same large size as *N. fuscipes*, but having bicolor tails. The throat, spot on chest and space between the hind legs is white to the roots of the hair.

This subspecific form may be described as follows:

General color above and on the sides, reddish brown, varying in some examples to yellowish brown, streaked with black, darkest on the center of the back, but usually lighter than is the corresponding part in *N. fuscipes*. Head and face same color as the back. Ears scantily haired, dark brown and edged narrowly with white. Whiskers longer than the head, black. Underparts white, except the belly, which is buff. The hairs on the throat, chest, and between the hind legs, white to their roots; those on flanks and belly plumbeous at base with white or buff tips. Hands and hind feet white, the latter obscured with dusky. Ankles brownish black. Tail bicolor, slaty black above, light gray beneath and on the sides. Total length of type, collector's measurement taken in the flesh, 446 mm.; tail, 210; hind leg, 46; ear, 33. There are no cranial characters especially worthy of notice.

The following measurements (collectors) are taken from seven examples:

Total length, mm.	385	411	405	446	448	428	394—Average about.	417
Tail, mm.	190	204	200	212	210	204	190— " " "	201
Hind legs, mm.	38	39	42	46	45	42	39— " " "	41
Ear, mm.	30	33	32	35	34	33	22— " " "	31

This form is intermediate in size between *N. fuscipes* and *N.*

macrotis, five specimens of the latter from San Antonio, San Bernardino Co., measuring as follows:

Total length, mm.....	370	385	404	352	409—Average about..	384
" " tail, mm.....	178	161	195	187	155— " "	..175

Five examples of *N. fuscipes* from Portola, average as follows:

Total length, mm.....	438	439	428	413	429—Average about..	429
" " tail, mm	210	209	212	204	208— " "	..209

21. *Neotoma macrotis*.

Neotoma macrotis. Thomas, Ann. and Mag. Nat. Hist., vol. xii, 1893, p. 234.

Fifty-six specimens as follows: 51, Carmel River, Monterey Co.; 5, San Antonio, San Bernardino Co.

All these examples appear referable to the species described by Thomas (l. c.). It is a considerably smaller animal than *N. fuscipes*, with a comparatively shorter tail, and has the hair on the middle of the body beneath, from the chin to the tail white to the roots. The tail is strongly bicolor, almost black above, and gray of various degrees of paleness, sometimes nearly white, beneath.

22. *Neotoma fuscipes affinis* subsp. nov.

Fifty examples from following localities: 13, Mt. Hamilton, Santa Clara Co.; 37, Alum Rock Park, Santa Clara Co.

This form of wood rat represents the gradation from *N. fuscipes* of the coast line to *N. f. streatorum* of the interior. It is a larger animal than the subspecies *annectens*, and its measurements will average about the same as those of *N. fuscipes*. The chief character to distinguish it from *N. fuscipes*, besides its rather lighter color, is its long bicolor tail and white feet, and from both *fuscipes* and *annectens* by having the hairs on all the central part of body beneath, white to the roots.

This subspecies may be described as follows:

Back reddish brown, with the base of hair plumbeous, the latter appearing throughout the back, giving this part an appearance as if lined with black, and making it darker than the flanks, which are a pale reddish brown, this color extending over the upper part of arms to the wrist. The thighs are paler brown than the flanks, grading into dusky at the ankles. Ears rather large, scantily haired, dark brown. Face a yellowish gray. Eyes surrounded by a black ring. Whiskers longer than head, black. Underparts, with feet and hands, and underparts of arms, white. Hairs on center of body from chin to tail, white to the

roots, those on the sides and beneath thighs and outer side of arms below, plumbeous at the base, tips white. Tail medium length, bicolor, brownish black above, gray beneath. Collectors' measurements taken in the flesh: Total length, 416 mm.; tail, 193; hind leg, 40; ear, 33. No especially different cranial characters from *N. fuscipes*.

23. *Neotoma fuscipes streator*.

Neotoma fuscipes streator. Merr. Proc. Biol. Soc. Wash., vol. ix, 1894, p. 124.

Twenty specimens from the Snow Mountains, Calusa Co.

I refer these examples to the subspecies described by Dr. Merriam (l. c.), from Carbondale Amidor Co. The hind feet are pure white in most of the specimens, but in some the colors of the ankles extends on to the feet in much the same manner as does the black on the same part in *N. fuscipes*. The ankles are dusky in some individuals, rufous in others, and the general color of the adults, is a bright rufous, darkest in the center of the back, differing in this respect from the dark grizzly brown strongly suffused with fulvous of the type specimen, but as that was taken in April and these examples in September and October, the difference of season may account for the change of color. In size they agree generally with the measurements given of the type. The character to distinguish this subspecies from its relatives is that the hairs of the under side of the body are all white to the roots, save a narrow line along the side, where they are plumbeous at the base. This is not mentioned by Dr. Merriam in his description, but I should be more inclined to rely upon it than on almost any other character given. There is so much individual variation in the skulls of all the members of the *N. fuscipes* group that it is very difficult, if not impossible, to distinguish the various species and races by these alone, and any assistance towards this end that can be obtained from color or its distribution is very welcome.

The following table will serve to distinguish the above forms:

	Tail long.	Tail short.	Unicolor.	Bicolor.	Hairs white to roots.
<i>Neotoma fuscipes</i>	x	....	x	....	Throat & belly.
" " <i>annectens</i>	x	....	.....	x	" "
" <i>microtis</i>.....	.....	x	.....	x	Central portion of underparts.
" " <i>affinis</i>	Med'm.	....	.....	x	Central portion of underparts.
" <i>fuscipes streator</i>.. .....	.....	x	x	.....	Entire portion of underparts.

24. *Neotoma intermedia*.

Neotoma intermedia. Rhodes' Am. Nat., 1894, Jany., p. 69.

Five specimens from San Antonio, San Bernardino Co. This is quite a small and frequently light colored rat when compared with any of the *fuscipes* group. It is a southern form, the type having been described from San Diego Co.

SUBFAMILY ARVICOLINÆ.

25. *Phenacomys orophilus*.

Phenacomys orophilus. Merr. N. Am. Fauna, No. 5, 1891, p. 65.

A single specimen from Pyramid Peak, Eldorado Co., having been compared with Dr. Merriam's specimens of *M. orophilus* would seem to be the same as that species. Pyramid Peak has an elevation of about 10,000 feet, and the present example was obtained at a height of about 7,500 feet. It is the first instance, I believe, of the species having been recorded from California, although it has been taken in several localities in Oregon and other northwestern states.

26. *Microtus edax*.

Microtus edax. Leconte, Proc. Acad. Nat. Scien., Phila., vol. vi, 1853, p. 405.

Forty-six specimens from the following localities: 24, Alum Rock Park, Santa Clara Co.; 34, Portola, San Mateo Co.; 4, Carmel River, Monterey Co.; 4, Mt. Hamilton, Santa Clara Co.; 2, San Antonio, San Bernardino Co.; 1, Snow Mountains, Calusa Co.; 1, Big Trees, Calaveras Co.

This series consists of both adults and young, but while there is considerable variation in the skulls of adults, this seems to be purely an individual difference, although in some instances it extends even to the size of the teeth. They however all appear to represent this well-known species, which has a pretty extended distribution in the State of California.

27. *Microtus mordax*.

Arvicola (*Mynomes*) *mordax*. Merr. N. Am. Fauna, No. 5, 1891, p. 61.

Seventy-seven specimens, as follows: 48, Silver Lake Amidor Co.; 3, Blue Lake, Alpine Co.; 5, Pyramid Peak, Eldorado Co.;

1, Echo, Eldorado Co.; 19, Hermit Valley, Calaveras Co.; 1, Edgewood, Douglas Co., Nevada. I compared these specimens with a number kindly sent to me by Dr. Merriam, of his *Arvicola mordax* from Idaho and other localities. My examples were all taken in June, July and August, and are therefore in the majority of cases in a different pelage from his specimens taken mostly later in the year. All are gray or grayish on the rump, making them very conspicuous when laid side by side. Dr. Merriam, in his description of the type (l. c.), does not mention this coloration, and I should have been inclined to consider these examples as representing a race of his species, as their localities are rather widely separated, were it not that among his specimens I found one that agreed with these in this particular and which was procured in the same month. It would appear, then, that the summer pelage is characterized by a decidedly gray rump, this color extending onto the thighs and hind legs. The skulls of these and Dr. Merriam's specimens presented no differences.

Measurements of seventeen examples give maximum total length, 202 mm.; minimum, 171. Tail, maximum, 72; minimum, 56. Hind leg, maximum, 24; minimum, 20.

28. *Microtus curtatus*.

Microtus curtatus. Cope, Proc. Acad. Nat. Scien., Phila., 1868, p. 2.

Three specimens from Mt. Siegel, Douglas Co., Nev., one of which is absolutely pure white. This would seem to be either a rare species in this locality, or the collector had poor luck in trapping it, as only three examples were procured out of the great number of animals obtained at Mt. Siegel.

29. *Peromyscus californicus*.

Arvicola californica. Peale, Mam. and Birds, U. S. Expl. Exp., 1848, p. 46.

Four hundred and fifty-six specimens from the following localities: Portola, San Mateo Co., 240; Alum Rock Park, Santa Clara Co., 176; Mt. Hamilton, Santa Clara Co., 20; Carmel River, Monterey Co., 15.

The examples in this large series were taken from December to July, and the color of the pelage varies according to the season, those from December to April being very dark, almost black above, and from thence onward to July, changing to gray or pale rufous, interspersed with black or brownish-black,

causing the animals of the extremes of the seasons to present a very different appearance. Indeed not a few so-called species have been described that have possessed less differences than these. The yellow on the chest is very variable, and apparently not dependent on season or sex, some examples showing it very conspicuously and of considerable extent, and others not even having a trace of it. Numerous examples have a conspicuous white tip to the tail.

30. *Peromyscus boylii*.

Hesperomys boylii. Baird, U. S. Pac. R. R. Expd., 1857, vol. vii, p. 471.

Sitomys gilberti. Allen, Bull. Am. Mus. Nat. Hist., vol. v, 1893, page 188.

One hundred and ninety-two specimens from the following localities: 41, Snow Mountains, Calusa Co.; 27, Mt. Hamilton, Santa Clara Co.; 32, Alum Rock Park, Santa Clara Co.; 44, San Antonio, San Bernardino Co.; 48, Carmel River, Monterey Co.

The Snow Mountain examples were taken in September, those from the other localities in May, June, July and August. The pelage varies in color, caused more by age than any other appreciable reason, and the fully adult specimens are typical individuals as described by Baird. The type is said to have come from Eldorado Co., and it is rather strange that in the great number of mice obtained in that county and present in this collection, no specimen of *boylii* was procured. It seems to be more generally distributed to the westward and southward. The ears vary greatly in length from 19 to 23 mm. not always caused by age. In 1893, Dr. Allen (l. c.) described a 'mouse from Bear Valley, San Benito Co., and Mount Hamilton, Santa Clara Co., represented by a small series of fourteen adults and four young, as *Sitomys gilberti*. On comparing a topotype of this species with my specimens I was convinced that *boylii* and *gilberti* were the same, and Dr. Allen, who saw the examples compared, agreed with me. But in order that there might be no error in this identification, I wrote to President Jordan of the Stanford University, to which institution Allen's series belonged, requesting him to forward them to me, which he most kindly did, and on comparing the type with my series, it appeared to me beyond question that it was the same as *boylii*, and *gilberti* will therefore have to become a synonym. Allen's type resembles exactly specimens of *boylii* from Alum Rock Park, Snow Mountains and

Mount Hamilton, in this collection, the last named locality being one of those from which his typical series came, and I am able to distinguish no characters worthy of consideration to suggest separating them. Some of my examples from those localities were compared with Dr. Merriam's specimens of *boylii* and agreed with them, so they may be considered as typical. The skulls of all these specimens, as may be expected, show considerable individual variations, but there are no characters, in my opinion, to be found among them upon which even a separate subspecific form can be based. After very careful investigation, with probably one of the largest series of this form existing to assist me, I am unable to arrive at any other conclusion than that *gilberti* and *boylii* are the same, and that the former must become a synonym. In his remarks on *S. gilberti* Dr. Allen compares it with *P. californicus*, "in many respects a miniature" of that species. But the two animals do not at all resemble each other, *gilberti* type being reddish brown, and *californicus* is never that color, and among the specimens from Stanford University I do not find any *P. californicus* from the localities from which Dr. Allen said his examples came. There is, however, a *Peromyscus* from Portola which seems not to have been described, and possibly Dr. Allen may have had a representative of it before him among his *gilberti* specimens not sufficient to make its differences conspicuous, but which might have led him inadvertently to consider his form comparable with *californicus*. In this collection there is a series of this mouse which I propose to separate as

31. *Peromyscus dyselius*. Sp. nov.

Twenty-seven specimens all procured at Portola, San Mateo Co., from December to April, the majority in the former month.

Similar in color to *P. californicus*, but very much smaller in size. Top of head, greater part of back and center of rump black interspersed with buff, many hairs being tipped with that color. Rest of head and back of neck grayish-buff, sides pale buff, hairs tipped with black and separated from the white of the underparts by a line of bright deep buff. This line extends the entire length of the body onto the shoulders and along the sides of the face to the anterior edge of the eye; a black ring surrounds the eye. Nose, flesh color. Whiskers longer than the head, black and silvery gray. Lips and entire under parts pure white, hairs plumbeous at base, sometimes a fulvous spot of greater or less extent is present on the breast. Hands and hind

legs grayish-white, sometimes tinged with buff. Tail about as long as the head and body, hairy and tufted, bicolor, dark brown above, yellowish-white beneath. Ears large, covered with black hairs. Skull resembles that of *S. californicus*, but is much smaller, and the frontals at the orbital region are considerably constricted, and the palate is narrower even than in *S. boylii*.

The following measurements from several individuals exhibit the diminutive size of this species compared with *S. californicus*. The dimensions and numbers given are those of the collector taken when the specimens were in the flesh:

No.	Total length.	Tail.	Hind leg.	Ear.
26	192 mm.	99	24.5	22
89	208 "	105	26	23.5
Type 24	193 "	101	26	23.5
408	189 "	104	21	22
88	203 "	102	25	23
47	195 "	103	26	23.5
25	191 "	96	25.5	23.5
238	193 "	96	26.5	21.5

32. *Peromyscus truei*.

Hesperomys truei. Schufeldt, Proc. U. S. Nat. Mus., vol. viii, p. 407, pl. xxi, 1885.

Eighteen specimens from Anderson Ranch, Douglas Co., Nevada. I compared these with specimens of *truei* in the National Museum, Washington, and found them to agree in every particular, both skins and skulls. The type described by Dr. Schufeldt comes from Fort Wingate, New Mexico, and this new locality extends the range of the species a long distance to the north. The examples were all taken in the month of August, and are of a pale yellowish gray color, inclining to buff on the rump and sides in some individuals, the young being a slaty blue.

33. *Peromyscus texanus gambelii*.

Hesperomys gambelii. Baird, U. S. P. R. R. Exp., 1857, vol. vii, p. 464.

Four hundred and sixteen specimens from following localities: Portola, San Mateo Co., 142; Alum Rock Park, Santa Clara Co., 24; Mt. Hamilton, Santa Clara Co., 7; Snow Mountains, Calusa Co., 30; Pyramid Peak, Eldorado Co., 41; Silver Lake, Amador Co., 139; Big Trees, Calaveras Co., 14; Hermit Valley, Calaveras Co., 18; Bloods, Calaveras Co., 1.

The examples in this great series show a considerable degree of variation, as might be expected, caused by difference of season, age and individual peculiarities. Were only a few examples from some localities available, it is not unlikely that new species or subspecies might be created. Certainly not a few have been, which exhibited less differences from other known forms than is observable in this series. The Portola specimens were procured from December to March; those from Alum Rock Park in May, from Mt. Hamilton in June, from Snow Mountains in September and October, from Pyramid Peak in July, and from Silver Lake in June and July.

The Portola examples are in the winter pelage, and are generally darker than the others, while the summer specimens from the interior and eastern part of the State are gray, certain ones with much rufous on the upper parts and flanks, more like the post-breeding pelage observed in *Tamias*. While the individuals from the interior are generally of a paler hue, they can be matched by those from the coast, and there seems to be no reasons for establishing even a separate race among them. The present collection extends the range of the species considerably, from the extreme east to the western borders of the state, and through a greater part of the central portion from north to south.

The extreme style of coloring, viz.: the entire upper parts deep rufous, of specimens from Hermit Valley, Calaveras Co., resemble so exactly those of *P. t. sonoriensis* from Woodford, Alpine Co., and Mt. Siegel, Douglas Co., Nevada, on the other side of the Sierras, that it is impossible to separate them, and it would seem that among these mountains the two subspecies run together and insensibly grade into the typical style of *gambelii* on the coast.

34. *Peromyscus texanus sonoriensis*.

Hesperomys sonoriensis. Leconte, Proc. Acad. Nat. Scien., Phila., vol. vi., 1853, p. 13.

Three hundred and twenty-nine specimens from the following localities: Woodford, Alpine Co., 52; Mt. Siegel, Douglas Co., Nevada, lower slopes, 245; Anderson Ranch, Douglas Co., 17; Winters Mines, Douglas Co., 15.

The examples of this large series are of the ashy gray color of typical *sonoriensis*, but there is considerable variation observable, and some of the extreme individuals are not to be distinguished

from specimens of *gambelii* from Calaveras, Amador and Eldorado counties, California; nor, strange as it may seem, from *P. t. arcticus* from Wyoming. The young are a pale bluish gray, quite different from those of typical *gambelii*, but two from Winters Mines are a mealy gray very similar to those of *arcticus*. It would seem that in this vicinity the three forms approach each other very closely, but there is not so much evidences of intergrading with the more eastern forms as there is with *gambelii* on the west, for judging from the series before me, it is impossible to decide where either *gambelii* or the present subspecies begins or ends, so gradually do they merge into each other.

35. *Peromyscus texanus medius*.

Peromyscus texanus medius. Mearns, Proc. U. S. Nat. Mus., vol. xviii, p. 446, 1895.

Seven specimens from San Antonio, San Bernardino Co.

I refer these specimens to Dr. Mearns' subspecies as described above. The measurements of the oldest individuals are somewhat less than those of *P. t. medius* generally, and one, collector's No. 1040, has the entire upper parts rufous. The measurements of the four oldest examples are :

Collector's No.	Sex	Total length.	Tail.	Hind leg.	Ear.	
1039,	♀	162 mm.	74	18	17	
"	1040,	♂	150 "	63	18	17
"	1035,	♀	146 "	62	19.5	16
"	1004,	♂	149 "	62	19	17.5

FAMILY GEOMYIDÆ.

36. *Thomomys monticolus*.

Thomomys monticolus. Allen, Bull. Am. Mus. Nat. Hist., vol. v., 1893, p. 48.

Nineteen specimens, as follows : 9, Silver Lake, Amador Co.; 3, Blue Lake, Alpine Co.; 1, Pyramid Peak, Eldorado Co.; 3, Big Trees, Calaveras Co.; 2, Hermit Valley, Calaveras Co.; 1, Bloods, Calaveras Co.

In coloration these specimens resemble on the upper parts the description of the type as given by Dr. Allen (l.c.), but in some there is very little of the gray tint visible, while the under parts vary from ashy white to a rather deep buff, without any white. Again, in others, the ashy white is almost overcome by the plumbeous of the basal portion of the fur, giving the under sur-

face a lead color rather than an ashy white hue. The other characters, such as the long and soft pelage, white feet and tail, mouth and pouch entrance, blackish, and the long and slender claws, are well exhibited.

Average measurements of seven specimens, recorded by the collector: Total length, 217 mm.; tail, 62; hind foot, 26. Maximum total length, 228; tail, 68; hind foot, 26. Minimum total length, 202; tail, 64; hind foot, 26.

37. *Thomomys bottæ*.

Oryctomys (Sarcophorus) bottæ. Eyd. and Gerv. Mag. Zool., vol. vi., 1836, p. 23, pl. xxi., fig. 4 molars.

Two specimens: 1, Portola, San Mateo Co.; 1, Carmel River, Monterey Co.

These specimens were taken respectively in July and December, and present two very different phases of pelage. The July example is bright reddish brown above and buff beneath, while the one obtained in December is a deep rufous brown above, inclining to black in the middle of the back, and plumbeous beneath, with a buff wash, caused by the tips of the hairs, which are of that color.

38. *Perognathus olivaceus*.

Perognathus olivaceus. Merr. N. Am. Faun., No. 1, 1889, p. 15.

Two specimens: 1, Mt. Siegel, Douglas Co., Nev.; 1, Anderson's Ranch, Douglas Co., Nev.

I refer these examples to Dr. Merriam's species named above, as they appeared to answer his description, but to be certain, I forwarded them to him for comparison with his specimens, and he decided that they were possibly intermediate between *P. olivaceus* and *P. o. amoenus*. The locality is a new one for the species, and possibly when a sufficient number of examples are obtained to enable a definite decision to be reached, the form may be found worthy of at least a sub-specific separation. At present I retain the specimens as belonging to Dr. Merriam's species.

39. *Perognathus californicus*.

Perognathus californicus. Merr. N. Am. Faun., No. 1, 1889, p. 26.

Two specimens from Portola, San Mateo Co.

These examples agree very well with Dr. Merriam's description of his type from Berkeley, California.

FAMILY DIPODIDÆ.

40. *Zapus alleni*. sp. nov.

General characters: Size large, tail very long, ears medium, partly concealed at base.

Color: Upper part of head and back brownish black, lined with deep fulvous; sides of head, flanks, front of fore legs, thighs and sides of the rump bright orange yellow, sparingly lined with black, presenting a strong contrast to the back, in this respect, however, resembling some other species of the genus. Ears like the top of head, with rusty margins. Entire under parts, with hands, hind legs and feet, pure white. Tail bicolor, brown above, white beneath, and white at tip, similar to *Z. insignis*, Miller. Nose brown; whiskers, longer than the head, white.

Cranial and dental characters: The skull, when compared with that of *Z. trinotatus montanus*, possibly its nearest ally, differs very considerably. The superior outline from the tip of the nasals to the interparietal is much more curved, and descends rapidly from the fronto-parietal suture to the occipital outline; that of the species compared hardly curving at all. The cranium is longer and narrower in proportion to its length, and there is little, if any, antorbital constriction of the frontals, these having their outer edges nearly straight to their junction with the nasals. These last are broad, being three mm. wide for their entire length, and rounded at the anterior extremity. The palate is wider than that of *Z. t. montanus*, and the pterygoids are straighter, causing the pterygoid fossa to be wider posteriorly. The palatal notch is inclined to a point, much less rounded than that of the subspecies compared, and not wider than the fossa, which last, in *Z. t. montanus*, is constricted midway its length. The auditory bullæ are of an entirely different shape, being relatively much shorter antero-posteriorly than transversely, and altogether much smaller. The basi-sphenoid and basi-occipital, especially at their junction, are both relatively of greater width. The occipital condyles are broader and more rounded, causing the plane of the basi-occipital to descend anteriorly, that of the subspecies compared being almost flat. The upper tooth row is 40 mm. in length, while that of *Z. t. montanus* is 45 mm., and the premolar and last molar are smaller and more rounded. The lower jaw presents no especial differences. Total length of skull

from anterior end of nasals to supra-occipital, 24 mm. Greatest zygomatic width, 13 mm. Length of nasals, 8.5

Measurements, taken by the collector, W. W. Price, in the flesh, of the type ♀ procured at Pyramid Peak, Eldorado Co., California: Total length, 217 mm.; tail, 124; hind leg, 32; ear, 14.

Seventeen specimens from the following localities: 4, Pyramid Peak, Eldorado Co.; 1, Blue Lake, Alpine Co.; 4, Silver Lake, Amador Co.; 8, Hermit Valley, Calaveras Co.

The nearest ally of this species is probably *Z. t. montanus*, Merr., and in general appearance they resemble each other, the present one being, however, rather brighter on the flanks. There is little difference in the general coloration, but the white tip to the tail, varying from a trace to $\frac{3}{4}$ of an inch in length, is a very distinguishing mark. The difference in the white among specimens is caused, I judge, by the tip of the tail having been broken off. Dr. Merriam very kindly sent me skins and skulls of his *Z. t. montanus* for comparisons, from Crater Lake, Oregon, which were of great assistance. The skull of No. 79862 was that one especially employed when comparing the two forms. It gives me great pleasure to bestow on this new species the name of my friend, Dr. J. A. Allen, Curator of Vertebrates in the Am. Mus. Nat. History, New York, so well known for his works in this and other branches of science.

FAMILY LEPORIDÆ.

41. *Lepus californicus*.

Lepus californicus. Gray, Proc. Zool. Soc., Lond., 1836, p. 88.

Two specimens from the Snow Mountains, Calusa Co.

42. *Lepus trowbridgii*.

Lepus trowbridgii. Baird, Proc. Acad. Nat. Scien., Phila., vol. vii, 1855, p. 333.

Fifteen specimens from the following localities: 1, Snow Mts., Calusa Co.; 6, Mt. Hamilton, Santa Clara Co.; 4, Alum Rock Park, Santa Clara Co.; 2, Portola, San Mateo Co.; 2, Carmel River, Monterey Co.

43. *Lepus arizonæ*.

Lepus arizonæ. Allen, Mon. N. Am. Roden., 1876, p. 332.

Nine specimens, as follows: 3, Mt. Siegel, Douglas Co., Nev.; 6, Anderson Ranch, Douglas Co., Nev.

These examples agree very well with Allen's description of the species.

44. *Lepus cinerascens*.

Lepus cinerascens. Allen, Bull. Am. Mus. Nat. Hist., vol. iii., 1890-91, p. 159.

Four examples from San Antonio, San Bernardino Co. The type came from Los Angeles Co.

ORDER CARNIVORA

FAMILY PROCYONIDÆ.

45. *Bassariscus astutus raptor*.

Bassariscus raptor. Baird U. S. Mex. Bound. Surv., 1859, p. 19. Seven specimens from the Snow Mountains, Calusa Co.

I refer these examples to *B. raptor* Baird, although in some respects they do not agree with his description. He says of the black rings on the tail, that "there are only *five* distinctly marked ones besides the tip, and the last, or subterminal one, is more than two inches long instead of about one." There are *six* black rings on the tails of all these specimens, and the subterminal and the two preceding ones are two inches wide, the white intervening being very narrow indeed. Baird further says that, comparing his type with a specimen from Eagle Pass, Texas, "There is no appreciable difference in the colors of the remaining portions of the body." These Snow Mountain examples are very differently colored from the Texas animals, some being a yellowish gray with much black intermixed, especially on the middle of the back, and the under parts are a uniform gray or grayish buff, with the throat buff, or buffy white. One specimen is rufous above mixed with black, and another sooty gray above inclining to black on the lower part of the back. They were all taken in September and October. There is evidently considerable variation among individuals in color, but none resemble the light hued animals from Texas and Arizona, and the tails are entirely different. There does not seem to be much appreciable differences in the skulls beyond what may be attributed to individual variation. There is considerable constriction behind the orbital processes of the frontals in some, hardly any at all in others, but the width of the zygoma is greater in the California examples.

The tail, while having as many black rings as are seen in Ari-

zona and Texas examples, six, has these very much broader and the white ones correspondingly narrower, giving the tail an entirely different appearance. The black rings are separated beneath by only a very narrow interval, as mentioned by Baird.

But although there are discrepancies in the appearance of these examples and Baird's description as I have already remarked, I think it best to include them under his name.

Mr. Rhoades, in his paper on the "Geographic variation in *Basariscus astutus*," Proc. Acad. Nat. Scien., Phila., 1893, p. 413, speaking of the tail of Baird's type, which was before him, says, "I find that in only one respect, the relative width of white and black tail rings does Baird's diagnosis, as given above, apply to the Pacific coast form, as contrasted with those from Texas. But in this respect typical *B. astutus* is very variable." Undoubtedly there is variation in the tail as there is in the coloration of numerous examples, but I think the California animal can readily be distinguished almost always by the broad, black tail rings causing the member to appear above of nearly that hue.

FAMILY MUSTELIDÆ.

46. *Spilogale phenax*.

Spilogale phenax. Merr. N. Am. Faun., No. 4, 1890, p. 13.

One adult specimen from the Snow Mountains, Calusa Co.

This specimen appears to agree with Merriam's description of *phenax* (l. c.), but there is no white whatever beneath the chin, or at the angles of the mouth, otherwise I see no differences. The hind foot is 51 mm., instead of 46, but as the measurement of the type was taken from the dry skin, while mine was the collector's from the animal in the flesh, this may account for the difference.

47. *Putorius arizonensis*.

Putorius arizonensis. Mearns Bull. Am. Mus. Nat. Hist., vol. iii, 1890-91, p. 234.

One specimen from Mt. Siegel, Nevada.

I refer this specimen to the species described by Mearns (l. c.). There is a tuft of white hairs at the base of the ears, and a small brown spot a short distance from the angle of the mouth. Whiskers brownish-black. White of the upper lip only extending a short distance beyond corner of the mouth. In other respects it agrees with Mearns' description. Example ♂, taken July 27, 1895.

Measurements by collector: Total length, 394 mm.; tail, 160; hind leg, 45; ear, 23.5.

ORDER INSECTIVORA.

FAMILY SORICIDÆ.

48. *Sorex obscurus*.

Sorex vagrans similis. Merr. N. Am. Faun., No. 5, 1891, pp. 34-35, pl. iv, fig. 3.

Sorex obscurus. Miller, N. Am. Faun., No. 10, 1895, p. 72.

Eight specimens from the following localities: 3, Pyramid Peak, Eldorado Co.; 4, Silver Lake, Amador Co.; and 1 Blue Lake, Alpine Co.

Dr. Merriam's type came from Timber Creek, Salmon River Mountains, Idaho, 8,200 feet altitude.

49. *Sorex montereyensis*.

Sorex montereyensis. Miller, N. Am. Faun., No. 10, 1895, p. 79.

Sixteen examples; 15 from Portola, San Mateo Co.; 1 Mt. Hamilton, Santa Clara Co. Type procured at Monterey, Cal.

The specimens of this series are very uniform in color, the females, however, being lighter in hue, more brown than blackish.

LIST OF A SMALL COLLECTION OF MAMMALS PROCURED
BY MR. E. S. THOMPSON IN THE STATES OF MONTANA
AND WYOMING.

FAMILY SCIURIDÆ.

1. *Sciurus fremonti*.

Sciurus fremonti. Aud. & Bach., N. A. Quad., vol. iii, 1853,
p. 237, pl. cxlix, fig. 1.

Two specimens from Eagle Creek, Montana.

2. *Tamias quadrivittatus luteiventris*.

Tamias quadrivittatus luteiventris. Allen, Bull. Am. Mus.
Nat. Hist., vol. iii, 1890-91, p. 101.

Six specimens: 5 from Eagle Creek, Choteau Co., Montana;
1 from Yansey, Yellowstone National Park.

3. *Tamias minimus*.

Tamias minimus. Bachman, Jour. Acad. Nat. Scien., Phila.,
vol. viii, 1839, p. 71.

Tamias quadrivittatus, var *pallidus*. Allen, Proc. Bost. Soc.
Nat. Hist., vol. xvi, 1874, p. 289.

Tamias asiaticus, var *pallidus*. Allen, Mon. N. Am. Roden.,
1877, p. 793.

Two specimens from Billings, Montana.

4. *Spermophilus armatus*.

Spermophilus armatus. Kennicott, Proc. Acad. Nat. Scien.,
Phila., 1863, p. 158.

Three specimens from the Yellowstone National Park, Wy-
oming.

These agree fairly well with Kennicott's description (l. c.), and
are recognizable by the gray color, and dusky tail.

FAMILY MURIDÆ.

SUBFAMILY ARVICOLINÆ.

5. *Peromyscus leucopus arcticus*.

Hesperomys leucopus arcticus. Mearns, Am. Mus. Nat. Hist.,
vol. ii, 1887-90, p. 285.

Four specimens from the Yellowstone National Park.

Rather larger in measurements than the usual run of *arcticus* with larger ears.

The four examples measure :

Total length.	Tail.
165 mm.	65
165 "	67
170 "	— broken.
160 "	70

6. *Microtus longicaudus*.

Arvicola (mynomes) longicauda. Merr., *Am. Nat.*, vol. xxii,

p. 934.

One specimen, Yellowstone National Park, Wyoming.

FAMILY LEPORIDÆ.

7. *Lepus campestris*.

Lepus campestris. Bachm., *Jour. Acad. Nat. Scien.*, Phila., vol. vii, 1837, p. 349.

One specimen from Eagle Creek, Montana.

8. *Lepus bairdii*.

Lepus bairdii. Hayden, *Am. Nat.*, vol. iii, 1869, p. 115.

One young specimen from Eagle Creek, Montana.

9. *Lepus baileyi*.

Lepus baileyi. Merr., *Proc. Biol. Soc. Wash.*, vol. xi, 1897, p. 147.

Two specimens from Billings, Montana.

FAMILY MUSTELIDÆ.

10. *Putorius longicaudus*.

Mustela longicauda. Bon., *Charlesw. Mag. N. H.*, vol. ii, 1838, p. 38.

One specimen from Eagle Creek, Montana.

COLLECTION OF MAMMALS FROM IOWA, PROCURED BY
G. K. CHERRIE.

FAMILY SCIURIDÆ.

1. *Sciurus l. ludovicianus*.

Sciurus ludovicianus. Custis, Barton's Med. & Phys. Jour.,
vol. ii, 1806, p. 43.

Five specimens, Knoxville.

2. *Sciurus hudsonicus*.

Sciurus h. hudsonicus. Pall. Nov. Sp. Glirium, 1778, p. 376.

One example.

3. *Sciuropterus v. volans*.

Mus volans. Linn., Syst. Nat., ed. 10, vol. i, 1758, p. 63.

One specimen, Knoxville.

4. *Tamias striatus*.

Tamias striatus. Linn., Syst. Nat., vol. i, 1758, p. 64.

One specimen, Cedar Rapids.

5. *Tamias quadrivittatus neglectus*.

Tamias quadrivittatus neglectus. Allen, Bull. Am. Mus. Nat.
Hist., vol. iii, 1890-91, p. 106.

One specimen.

FAMILY MURIDÆ.

SUBFAMILY ARVICOLINÆ.

6. *Microtus (Pedomys) austerus*.

Hesperomys austerus. Baird. Proc. Acad. Nat. Scien., Phila.,
vol. vii, 1855, p. 336.

Three examples, Knoxville.

7. *Peromyscus leucopus*.

Musculus leucopus. Rafinesque, Am. Month. Mag., vol. iii,
1818, p. 446.

One specimen, Knoxville.

8. *Peromyscus michiganensis*.

Mus. michiganensis. Aud. & Bach., Jour. Acad. Nat. Scien., Phila., vol. viii, 1842, p. 305.

Two specimens from Knoxville and 4 from Dickinson, Dakota.

The Dakota specimens are much redder than those from Iowa, caused by differences in age, the Dakota examples being older.

FAMILY GEOMYIDÆ.

9. *Thomomys talpoides*.

Cricetus talpoides. Rich., Zool. Jour., vol. iii, App., 1828, p. 518.

Six examples, Canonball River, Dakota.

ORDER INSECTIVORA.

FAMILY SORICIDÆ.

10. *Blairina brevicauda*.

Sorex brevicauda. Say Long's Exped., vol. i, 1823, p. 164.

One specimen, Knoxville.

FAMILY TALPIDÆ.

11. *Scalops argentatus*.

Scalops argentatus. Aud. & Bach., Jour. Acad. Nat. Scien., Phila., vol. viii, 1842, p. 292.

One specimen, Knoxville.

FAMILY LEPORIDÆ.

12. *Lepus sylvaticus mearnsii*.

Lepus sylvaticus mearnsii. Allen, Bull. Am. Mus. Nat. Hist., 1894, vol. vi, p. 171.

Seven specimens: 5 Knoxville, Iowa; 2 Dickinson, Dakota.

MAMMALS COLLECTED BY DR. S. E. MEEK IN THE SAW TOOTH
MOUNTAINS, IDAHO, AND PRESENTED TO THE MUSEUM.

FAMILY SCIURIDÆ.

1. *Sciurus carolinensis*.

Sciurus carolinensis. Gm. Syst. Nat., 1788, p. 143.

Five specimens in summer pelage.

2. *Sciurus richardsoni*.

Sciurus richardsoni. Bach., Proc. Zool. Soc., Lond., vol. vi,
1838, p. 100.

Four examples.

3. *Tamias cinerascens*.

Tamias cinerascens. Merr., N. Am. Faun., No. 4, 1890, p. 20.

Four specimens, two adults, two young.

4. *Tamias minimus pictus*.

Tamias minimus pictus. Allen, Bull. Am. Mus. Nat. Hist.,
vol. iii, 1890-91, p. 115.

Two specimens.

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